

June 27, 2016

Washington State Department of Ecology
Ms. Gayle Garbush
Toxics Cleanup Program
3190 160th Avenue Southeast
Bellevue, Washington 98008

**RE: ERTS #664942 – COSTCO SILVERDALE FUEL FACILITY
UST CLOSURE AND INDEPENDENT CLEANUP REPORT
10000 MICKELBERRY ROAD NORTHWEST
SILVERDALE, WASHINGTON
PACIFIC CREST NO. 182-003**

Dear Ms. Garbush:

This report has been prepared for the Washington State Department of Ecology (Ecology) to document an underground storage tank (UST) closure and independent cleanup of petroleum contaminated soil located at 10000 Mickelberry Road Northwest in Silverdale, Washington (Subject Property) (Figure 1). A UST Site Assessment was conducted pursuant to the permanent closure of an existing Costco Wholesale Corporation (Costco) Fuel Facility associated with the Costco Silverdale Warehouse. The existing Fuel Facility is being permanently closed to facilitate its relocation to the southeast corner of the Subject Property (Figure 2). The Fuel Facility included three 20,000-gallon double-walled fiberglass USTs used for the storage of unleaded regular and premium gasoline, and a 1,200-gallon aboveground storage tank (AST) containing gasoline fuel additive¹ (Figure 3). Analysis of soil samples collected from beneath two separate sections of product piping detected minor areas with concentrations of gasoline range organics (GRO) and benzene exceeding the Model Toxics Control Act (MTCA) cleanup regulation (Chapter 173-340 WAC) Method A cleanup levels. The objective of this report is to document the UST closure and independent cleanup activities sufficient to demonstrate that the cleanup meets the substantive requirements of MTCA for Ecology to provide a No Further Action (NFA) determination for leaking underground storage tank (LUST) incident ERTS #664942 (the Site).

The UST closure activities included conducting a Site Assessment in accordance with the Ecology *Guidance for Site Checks and Site Assessments for Underground Storage Tanks* (Publication No. 90-52, revised May 2003) and the LUST reporting requirements provided under MTCA.

REPORT ORGANIZATION

The activities summarized in this report are presented in the following sections:

Property Description – This section presents a general description of the Subject Property.

¹ Components of Costco's gasoline fuel additive include: xylene, ethylbenzene, petroleum naphtha, polyetheramine, and naphthalene.

Closure Activities – This section summarizes the activities conducted to coordinate the UST removal, and to document the removal and conditions encountered.

Independent Cleanup – This section summarizes the independent soil cleanup conducted by remedial excavation.

Waste Management – This section summarizes the handling and disposal of waste generated by the cleanup activities.

PROPERTY DESCRIPTION

The Subject Property is owned by Costco and is comprised of approximately 13.81 acres and is located east adjacent to Mickelberry Road Northwest in Silverdale, Washington. The Subject Property is relatively flat, regionally sloping to the west, and has an approximate average elevation of 70 feet above mean sea level. Surrounding properties are developed with commercial structures, excepting undeveloped land to the north. The Subject Property has operated as Costco Wholesale Warehouse since the late 1980s, and was previously undeveloped. The Fuel Facility was constructed and opened on the Subject Property in 1997.

CLOSURE ACTIVITIES

The following activities were conducted pursuant to the UST closure:

- The UST closure was conducted on May 9 and May 10, 2016 under the supervision and approval of a City of Silverdale Building Inspector. Mr. Joel Harrington, an International Code Council (ICC)-certified Site Assessor, conducted the Site Assessment activities. Emerald Services, Inc. of Seattle, Washington emptied and rinsed each of the USTs, after which Granite Petroleum of Spokane, Washington (Granite Petroleum) conducted the UST removal. Due to complications during an attempted removal, one of the USTs was demolished in place and removed from the excavation in multiple pieces. The two remaining USTs were removed from the excavation and demolished on Site. Closure documents, including the Ecology 30-Day Notice for UST Removal, UST cleaning and rinsate disposal documentation, the fire inspection permit, and certification of destruction are provided in Appendix A.
- With the exception of the UST demolished in the excavation, Mr. Harrington inspected the USTs for signs of deterioration or leakage that would have occurred prior to removal. Each tank measured approximately 10 feet in diameter, 40-feet long, and both of the inspected USTs appeared to be structurally sound. Soil within the excavation and beneath product piping and dispenser islands was field screened for evidence of a petroleum hydrocarbon release using visual or olfactory observation, and for the presence of volatiles using a photoionization detector. No indication of a release was observed based on inspection or field screening evidence.
- The excavation measured approximately 52-feet long, 45-feet wide and 13.5-feet deep. Soil encountered in the excavation was described as fill material consisting of moist, sandy gravel mixtures. Groundwater was present in the bottom of the excavation at an approximate depth of 12.5 feet below ground surface (bgs).

- Soil sampling locations were selected based on roughly equal-spacing distribution. Pacific Crest collected two soil samples from each sidewall of the excavation. A grab groundwater sample was collected from the bottom of the excavation at a depth of approximately 12.5 feet bgs using a disposable polyethylene bailer. Three soil samples were collected below product piping, and eight soil samples were collected below the dispenser islands. An illustration of the UST excavation with the soil sampling locations is provided as Figure 3. Samples for chemical analysis were prepared in accordance with SW 846 Method 5030 and 5035, with care taken to minimize loss of volatiles. Following collection, the samples were immediately transferred into laboratory-prepared sample containers, appropriately labeled, and placed into a cooler on ice. Samples were transported to OnSite Environmental Inc. (OnSite) of Redmond, Washington, under standard chain-of-custody protocols. OnSite analyzed the samples on a 24-hour turn-around-time for: GRO by Ecology Method NWTPH-Gx; and benzene, toluene, ethyl benzene, and total xylenes (BTEX) by EPA Method 8021B.

A photographic log is provided as Appendix B. The UST Site Assessment Checklist is provided as Appendix C.

The analytical results indicated the following:

- A soil sample collected beneath Dispenser Island #6, DI6-051016-3.0, detected a benzene concentration of 0.054 milligrams per kilogram (mg/kg), exceeding the MTCA Method A cleanup level of 0.03 mg/kg. Toluene was also detected in the sample at a concentration of 0.43 mg/kg.
- A soil sample collected beneath product piping associated with the gasoline fuel additive AST, PP1-051016-2.0, detected a GRO concentration of 51 mg/kg, exceeding the MTCA Method A cleanup level of 30 mg/kg for sites at which benzene is detected. Ethyl benzene and total xylenes were also detected in the sample at concentrations of 0.11 mg/kg and 0.11 mg/kg, respectively.
- No analytes were detected at concentrations above the practical quantitation limit (PQL) in the remaining soil samples.
- Total xylenes were detected in the groundwater sample (EP1-051016-GW) at a concentration of 3.0 micrograms per liter. None of the remaining analytes were detected at concentrations above the PQL in the groundwater sample.

The soil and groundwater analytical results are summarized in Tables 1 and 2, respectively. The laboratory analytical report is provided in Appendix D.

Based on the confirmed exceedances of benzene and GRO in soil, a LUST incident was reported to Ecology on May 13, 2016. A copy of the telephone communication memorandum for the conversation is provided in Appendix E.

INDEPENDENT CLEANUP

The following activities were conducted to remove soil with concentrations exceeding MTCA Method A cleanup levels.

- On May 13, 2016, a remedial excavation was conducted to remove soil with concentrations of benzene and GRO exceeding MTCA Method A cleanup levels. Pacific Crest excavated approximately 0.5 and 1.0 cubic foot of soil from beneath the gasoline fuel additive AST product piping and Dispenser Island #6, respectively (Figure 3). A soil sample was collected from below each of the excavated areas to confirm that impacted materials were removed. The soil samples were submitted to OnSite for analysis on a 24-hour turn-around-time for GRO by Ecology Method NWTPH-Gx, and BTEX by EPA Method 8021B.
- Analytical results did not detect GRO or BTEX at concentrations above the PQL in either of the soil samples (Table 1) (Appendix D).

On June 7, 2016, Pacific Crest filed an electronic status update on the independent cleanup to Ecology. A copy of this correspondence is provided in Appendix E.

WASTE MANAGEMENT

During UST closure activities, Pacific Crest collected five stockpile soil samples to facilitate waste characterization. Excavated soil was temporarily stockpiled on plastic sheeting and covered, pending receipt of stockpile sampling analytical results. Upon the determination that no analytes were detected above the PQL in the stockpile soil samples, Granite Petroleum coordinated the transport and disposal of the stockpiled soil. Documentation of the disposal of residual gasoline and rinsate pumped from the USTs by Emerald Services is provided in Appendix A.

Soil excavated during the independent cleanup activities was placed in an appropriately labelled, 30-gallon, Department of Transportation-approved drum pending disposal. Stericycle has been retained to transport the drum off-site for disposal in accordance with state and federal regulations.

CLOSING

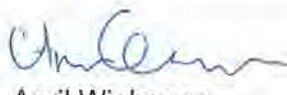
The information presented herein documents UST closure and the independent cleanup of minimal quantities of soil with concentrations of GRO and benzene exceeding MTCA Method A cleanup levels at the Costco Silverdale Fuel Facility. Based on this information, Pacific Crest respectfully requests a NFA determination for the Site, and closure of the LUST incident ERTS #664942.

If you have any questions or require additional information please do not hesitate to contact the undersigned at 425-888-4990.

Sincerely,

PACIFIC CREST ENVIRONMENTAL, LLC


Joel Harrington
ICC Certified Site Assessor


April Wiebenga
Associate Geologist

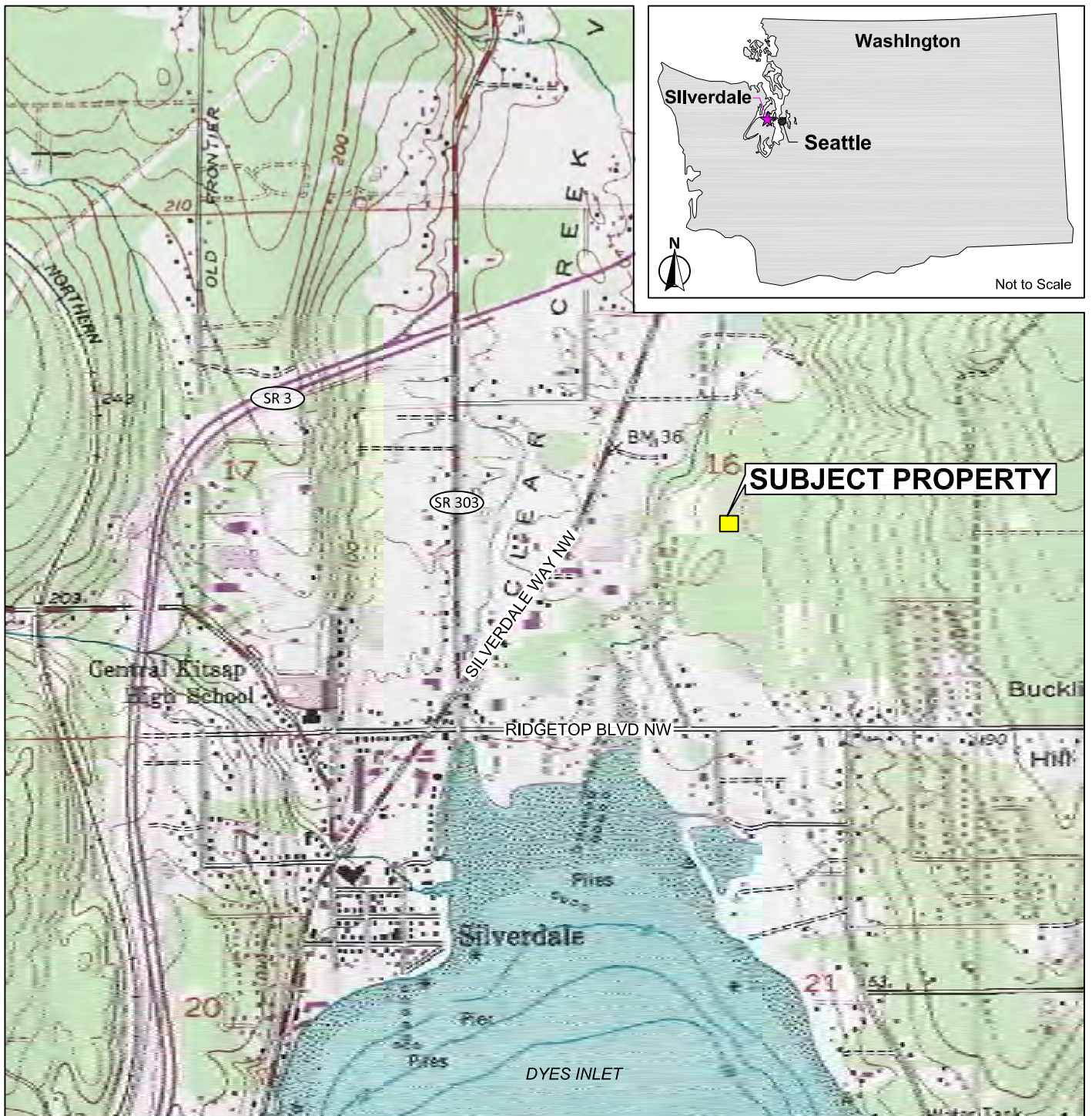
Attachments:

- Figure 1 – Site Location Map
- Figure 2 – Subject Property
- Figure 3 – Site Plan with Soil and Groundwater Sampling Locations
- Table 1 – Analytical Results Summary – Soil
- Table 2 – Analytical Results Summary – Groundwater
- Appendix A – UST Closure Documentation
- Appendix B – Photographic Log
- Appendix C – UST Site Assessment Checklist
- Appendix D – Laboratory Analytical Reports
- Appendix E – Ecology Correspondence

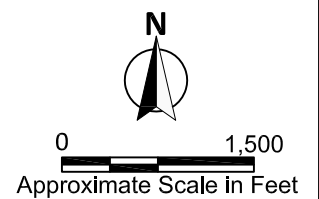
FIGURES

**ERTS #664942 – COSTCO SILVERDALE FUEL FACILITY
UST CLOSURE AND INDEPENDENT CLEANUP REPORT
10000 MICKELBERRY ROAD NORTHWEST
SILVERDALE, WASHINGTON**

PACIFIC CREST NO. 182-003



Source: MyTopo



1/12/2016 182-003-006.dwg FIG 2 Subject Prop

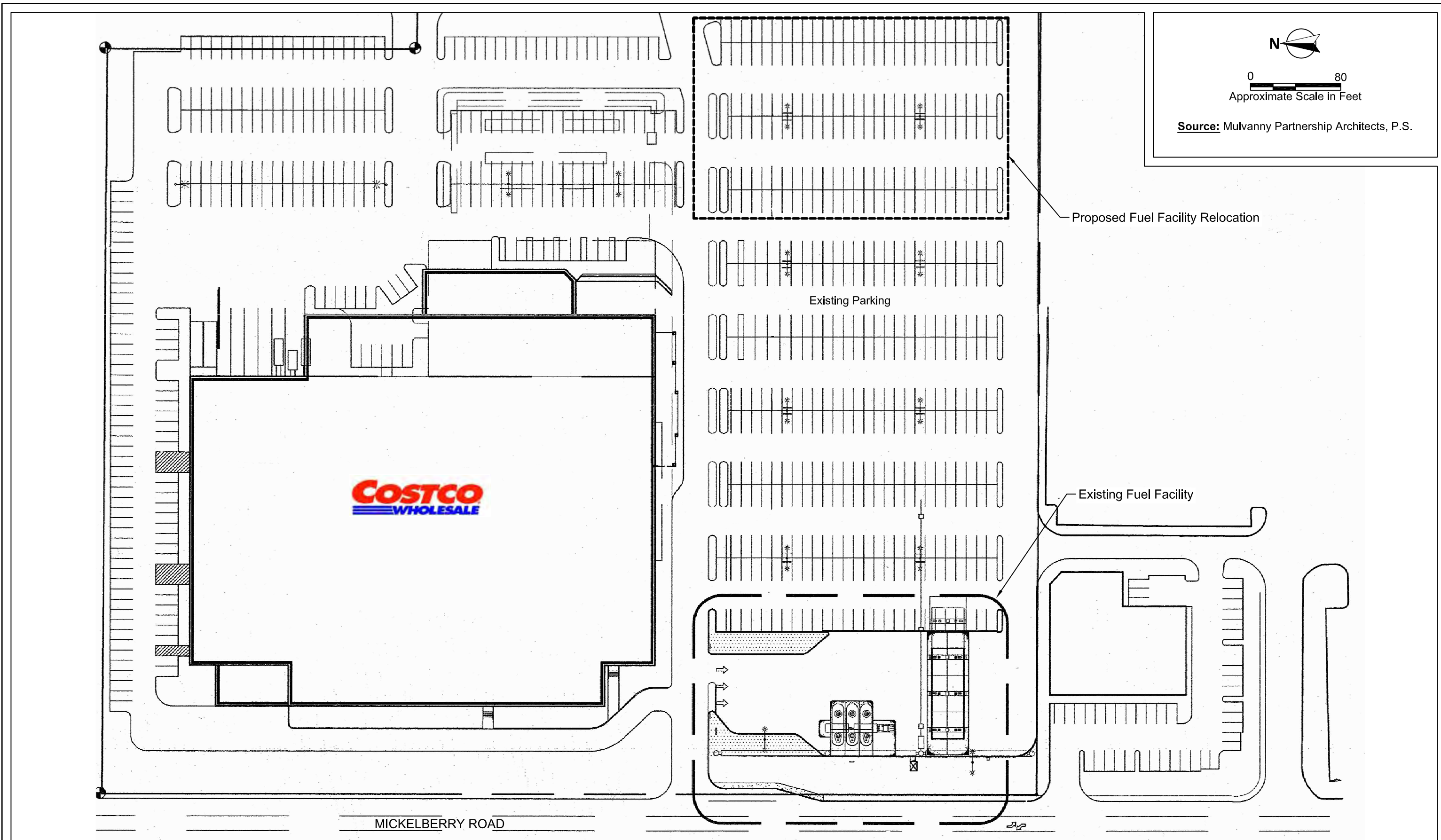
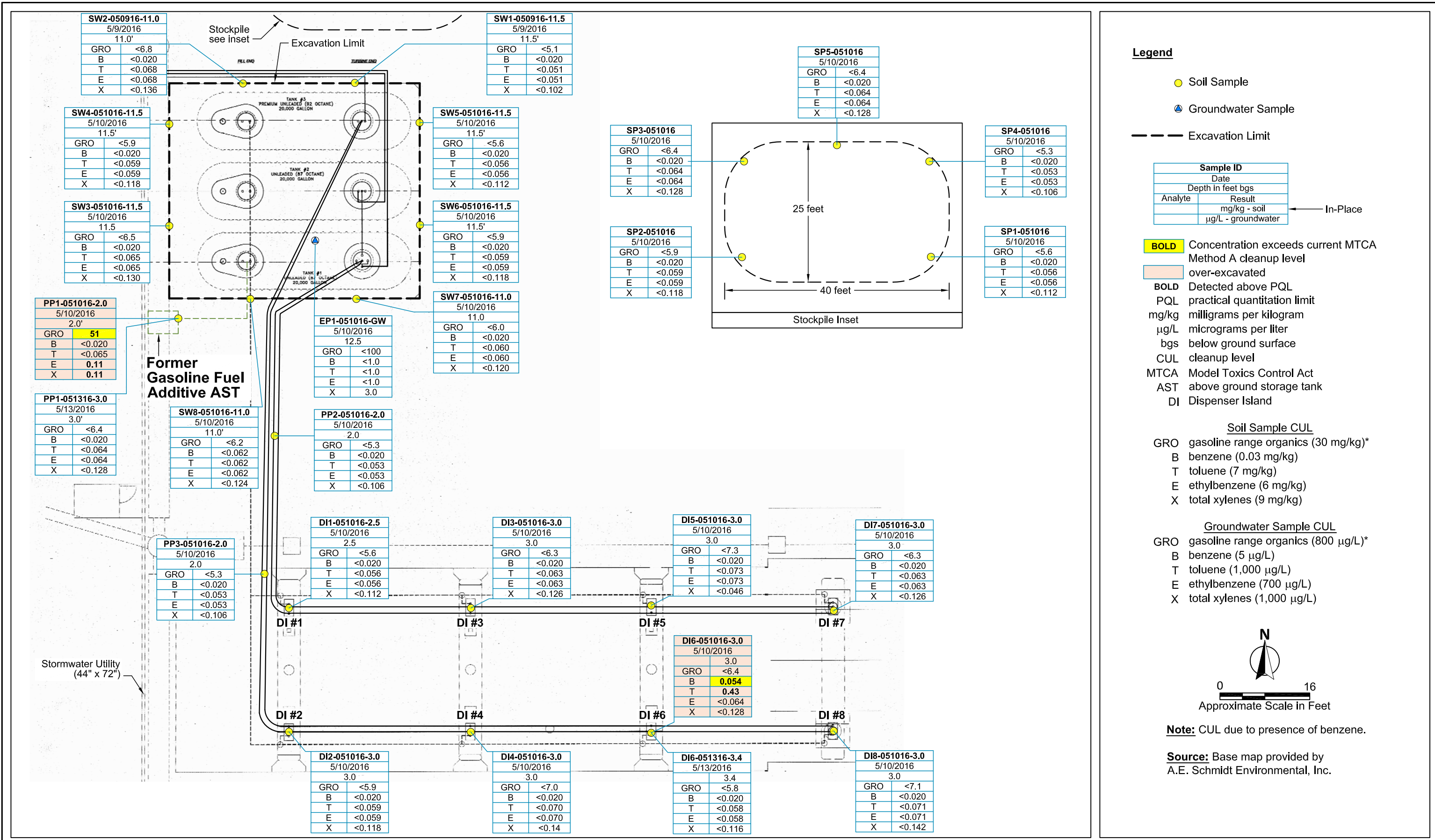


Figure 2

Subject Property

6/27/2016 182-003-005.dwg Fig 3 Sample Locations



TABLES

**ERTS #664942 – COSTCO SILVERDALE FUEL FACILITY
UST CLOSURE AND INDEPENDENT CLEANUP REPORT
10000 MICKELBERRY ROAD NORTHWEST
SILVERDALE, WASHINGTON**

PACIFIC CREST NO. 182-003

Table 1
Analytical Results Summary - Soil
Costco -Silverdale Fuel Facility
10000 Mickelberry Road Northwest
Silverdale, Washington
Pacific Crest PN: 182-003

Location ID	Sample ID	Sampled By	Sample Date	Sample Depth ¹	Soil Analytical Results (milligrams per kilogram) ²				
					GRO	Benzene	Toluene	Ethyl Benzene	Total Xylenes
Sidewall	SW1-050916-11.5	Pacific Crest	5/9/2016	11.5	<5.1	<0.020	<0.051	<0.051	<0.102
Sidewall	SW2-050916-11.0	Pacific Crest	5/9/2016	11	<6.8	<0.020	<0.068	<0.068	<0.136
Sidewall	SW3-051016-11.5	Pacific Crest	5/10/2016	11.5	<6.5	<0.020	<0.065	<0.065	<0.130
Sidewall	SW4-051016-11.5	Pacific Crest	5/10/2016	11.5	<5.9	<0.020	<0.059	<0.059	<0.118
Sidewall	SW5-051016-11.5	Pacific Crest	5/10/2016	11.5	<5.6	<0.020	<0.056	<0.056	<0.112
Sidewall	SW6-051016-11.5	Pacific Crest	5/10/2016	11.5	<5.9	<0.020	<0.059	<0.059	<0.118
Sidewall	SW7-051016-11.0	Pacific Crest	5/10/2016	11	<6.0	<0.020	<0.060	<0.060	<0.120
Sidewall	SW8-051016-11.0	Pacific Crest	5/10/2016	11	<6.2	<0.020	<0.062	<0.062	<0.124
Stockpile	SP1-051016	Pacific Crest	5/10/2016	NA	<5.6	<0.020	<0.056	<0.056	<0.112
Stockpile	SP2-051016	Pacific Crest	5/10/2016	NA	<5.9	<0.020	<0.059	<0.059	<0.118
Stockpile	SP3-051016	Pacific Crest	5/10/2016	NA	<6.4	<0.020	<0.064	<0.064	<0.128
Stockpile	SP4-051016	Pacific Crest	5/10/2016	NA	<5.3	<0.020	<0.053	<0.053	<0.106
Stockpile	SP5-051016	Pacific Crest	5/10/2016	NA	<5.3	<0.020	<0.053	<0.053	<0.106
Product Piping	PP1-051016-2.0	Pacific Crest	5/10/2016	2	51	<0.020	<0.020	0.11	0.11
Product Piping	PP1-051316-3.0	Pacific Crest	5/13/2016	3	<5.8	<0.020	<0.058	<0.058	<0.116
Product Piping	PP2-051016-2.0	Pacific Crest	5/10/2016	2	<5.3	<0.020	<0.053	<0.053	<0.106
Product Piping	PP3-051016-2.0	Pacific Crest	5/10/2016	2	<5.3	<0.020	<0.053	<0.053	<0.106
Dispenser Island	DI1-051016-2.5	Pacific Crest	5/10/2016	2.5	<5.6	<0.020	<0.056	<0.056	<0.112
Dispenser Island	DI2-051016-3.0	Pacific Crest	5/10/2016	3	<5.9	<0.020	<0.059	<0.059	<0.118
Dispenser Island	DI2-B-051016-3.0*	Pacific Crest	5/10/2016	3	<6.6	<0.020	<0.066	<0.066	<0.132
Dispenser Island	DI3-051016-3.0	Pacific Crest	5/10/2016	3	<6.3	<0.020	<0.063	<0.063	<0.126
Dispenser Island	DI4-051016-3.0	Pacific Crest	5/10/2016	3	<7.0	<0.020	<0.070	<0.070	<0.140
Dispenser Island	DI5-051016-3.0	Pacific Crest	5/10/2016	3	<7.3	<0.020	<0.073	<0.073	<0.146
Dispenser Island	DI6-051016-3.0	Pacific Crest	5/10/2016	3	<6.4	0.054	0.43	<0.064	<0.128
Dispenser Island	DI6-051316-3.4	Pacific Crest	5/13/2016	3.4	<4.7	<0.020	<0.047	<0.047	<0.094
Dispenser Island	DI7-051016-3.0	Pacific Crest	5/10/2016	3	<6.3	<0.020	<0.063	<0.063	<0.126
Dispenser Island	DI8-051016-3.0	Pacific Crest	5/10/2016	3	<7.1	<0.020	<0.071	<0.071	<0.142
MTCA Method A Cleanup Level for Soil - Unrestricted Land Use⁴					30⁵	0.03	7	6	9

NOTES:

¹ Depth in feet below original ground surface

² Preliminary analysis by Ecology Method NWTPH-HCID as warranted, with follow up by Ecology Method NWTPH-Dx

³ Samples analyzed by EPA Method 6010C

⁴ Table 740-1 of MTCA, Chapter 173-340 of the Washington Administrative Code, Method A Cleanup Level, revised 2013

⁵ Cleanup level due to the presence of benzene.

= soil over-excavated

BOLD = Concentration detected above practical quantitation limit

BOLD / Highlight = Concentration in exceedance of MTCA Method A Cleanup Level

< = result is less than practical quantitation limit listed or analyte not detected at or above the reporting limit

* = duplicate of soil sample DI2-051016-3.0

GRO = gasoline range organics

MTCA = Model Toxics Control Act

Pacific Crest = Pacific Crest Environmental, LLC

Table 2
Analytical Results Summary - Groundwater
Costco -Silverdale Fuel Facility
10000 Mickelberry Road Northwest
Silverdale, Washington
Pacific Crest PN: 182-003

Location ID	Sample ID	Sampled By	Sample Date	Sample Depth ¹	Groundwater Analytical Results (micrograms per liter) ²				
					GRO	Benzene	Toluene	Ethyl Benzene	Total Xylenes
Excavation Pit	EP1-051016-GW	Pacific Crest	5/10/2016	12.5	<100	<1.0	<1.0	<1.0	3.0
Excavation Pit	EP2-051016-GW*	Pacific Crest	5/10/2016	12.5	<100	<1.0	<1.0	<1.0	2.6
MTCA Method A Cleanup Level for Groundwater - Unrestricted Land Use⁴					800⁵	5	1,000	700	1,000

NOTES:

¹ Depth in feet below original ground surface

² Preliminary analysis by Ecology Method NWTPH-HCID as warranted, with follow up by Ecology Method NWTPH-Dx

³ Samples analyzed by EPA Method 6010C

⁴ Table 720-1 of MTCA, Chapter 173-340 of the Washington Administrative Code, Method A Cleanup Levels, revised 2013

⁵ Cleanup level due to the presence of benzene in soil.

* = duplicate of sample EP1-051016-GW

BOLD = Concentration detected above practical quantitation limit

< = result is less than practical quantitation limit listed or analyte not detected at or above the reporting limit

GRO = gasoline range organics

MTCA = Model Toxics Control Act

Pacific Crest = Pacific Crest Environmental, LLC

**APPENDIX A
UST CLOSURE DOCUMENTATION**

**ERTS #664942 – COSTCO SILVERDALE FUEL FACILITY
UST CLOSURE AND INDEPENDENT CLEANUP REPORT
10000 MICKELBERRY ROAD NORTHWEST
SILVERDALE, WASHINGTON**

PACIFIC CREST NO. 182-003



Costco Loc. No. 13 / BCE No. 6247

UNDERGROUND STORAGE TANK (UST)

30-DAY NOTICE

(See back of form for instructions)

FOR OFFICE USE ONLY

Site ID # _____

FS ID # _____

Please ✓ the appropriate box: ☐ Intent to Install ☒ Intent to Close

HQ (360)407-7170 / Central (509)575-2490 / Eastern (509)329-3400 / Northwest (425)649-7000 / Southwest (360)407-6300

SITE INFORMATION	OWNER INFORMATION (this form will be returned to this address)
601-024-674	Costco Wholesale
Tag or UBI number	UST Owner/Operator
Coscto Gasoline (Loc. No. 13)	P.O. Box 35005
Site Name	Mailing Address/PO Box
10000 Mickleberry Road N.W.	Seattle 98124-3405
Site Physical Address	City Zip Code
Silverdale 98383	(425) 313-8100
City Zip Code	Owner/Operator Phone Number
TBD	dbock@costco.com
Site Phone Number	Owner/Operator Email Address

TANK INFORMATION				
Tank ID	Substance Stored	Capacity	Date Project is Expected to Begin	Comments:
1	Unleaded	20,000	5/5/2016	
2	Unleaded	20,000	5/5/2016	
3	Premium	20,000	5/5/2016	

1) SERVICE PROVIDER INFORMATION - check the appropriate boxes

PLEASE NOTE: INDIVIDUALS PERFORMING UST SERVICES MUST BE ICC CERTIFIED OR HAVE PASSED ANOTHER QUALIFYING EXAM APPROVED BY THE DEPARTMENT OF ECOLOGY.

<input type="checkbox"/> Installer	<input checked="" type="checkbox"/> Decommissioner	<input type="checkbox"/> Site Assessor
Granite Petroleum, Inc.	Mark Lundt	
Service Provider Company Name	Contact Person	
Pat Alamillo	509-482-7016	
Certified Service Provider Name	Contact Phone Number	
5080219	marc@granitepetroleum.com	
ICC Certification #	Contact Email Address	

2) SERVICE PROVIDER INFORMATION (REQUIRED IF USING MORE THAN ONE PROVIDER) - check the appropriate boxes

<input type="checkbox"/> Installer	<input type="checkbox"/> Decommissioner	<input type="checkbox"/> Site Assessor
Service Provider Company Name	Contact Person	
Certified Service Provider Name	Contact Phone Number	
ICC Certification #	Contact Email Address	

Instructions

Please Read Carefully

AFTER COMPLETING THIS FORM, RETURN TO:

DEPARTMENT OF ECOLOGY
TOXICS CLEANUP PROGRAM
P.O. BOX 47655
OLYMPIA, WA 98504-7655

GENERAL

Under WAC 173-360-200 and 173-360-385, owners and operators are required to notify Ecology 30 days prior to beginning underground storage tank (UST) installation or decommissioning projects. Please use a separate form for each activity. Once this form is received and processed by Ecology, it is date stamped and returned to the owner listed on the form. Installation and decommissioning projects may begin 30 days after the date stamped on the form. If a project cannot meet the deadlines described below, you must submit an additional 30-Day Notice. The 30-day wait period may be waived on these additional 30-Day Notices by contacting the inspector in your region.

SITE AND OWNER INFORMATION

Fill in the site and owner information and be sure to provide telephone numbers and email addresses so that any problems can be resolved quickly. Include the facility compliance tag or UBI number for tank closures.

TANK INFORMATION

List tanks to be installed or closed, substance stored (e.g. gas, diesel, etc), tank size and date the project is expected to begin. **The contact person listed on this form must confirm the exact date an installation and/or decommissioning project will begin at least three business days before proceeding.** Please report tank ID number(s) for tanks to be closed and assign new Tank ID number(s) to tanks being installed. If you are installing new tanks, do not assign a Tank ID number that has previously been used at the facility. Use the Comments box to include additional information, such as when product was removed so that no more than one inch of residue remains in the system.

TANK INSTALLATIONS

List the installation company. The date stamped on the form indicates the beginning of a 90-day period in which an installation project must begin. Once, processed, this form also allows you to receive a one-time drop of product, for UST system testing purposes only. The fuel drop is not required to occur within this 90-day period.

To dispense product and receive additional deliveries, you must complete the Business License registration and obtain your facility compliance tag from Ecology. The registration information must be submitted to the Department of Revenue within 30 days of installation to receive a Business License with the appropriate tank endorsement(s). **If, at any time, your tank(s) store greater than one inch of product, you must begin using an acceptable release detection method to monitor for leaks every month.**

PERMANENT TANK CLOSURES

List the closure and site assessor companies. Upon receiving a completed 30-day closure form, Ecology will stamp the date received on the form and return a copy to the owner. Decommissioning projects must be completed 90 days after the stamped date. **No work may begin within the first 30 days unless a waiver has been obtained from Ecology.**

Contact your local fire marshal and planning department prior to tank closure to find out if any additional permits are required by county or other local jurisdictions. Compliance with the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC, may be required.

A site assessment is required at the time of closure. Contamination found or suspected at the site must be reported to the appropriate Ecology regional office within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days; if contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

The following are examples of tanks that are exempt from notification requirements.

- ❖ Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only.
The fuel must be used for farm purposes and cannot be for resale.
- ❖ Tanks used for storing heating oil that is used solely for the purpose of heating the premises.
- ❖ Tanks with a capacity of 110 gallons or less.
- ❖ Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.
- ❖ Emergency overflow tanks, catch basins, or sumps.

From: Ugo Daniel-Muoneke
Sent: Thursday, April 07, 2016 10:42 AM
To: Leo, Antony (ECY)
Cc: Jay Grubb; Alexia Inigues; Mary Weber
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice to Intent to Close-BCE #6247
Attachments: 30-Day Notice with Intent to Close-2016-03-29.pdf

Good morning Antony,

Pursuant to our telephone conversation, attached is the 30-Day notice Intent to Close we previously submitted to your office for the ongoing Silverdale Costco Gasoline On-Site relocation project.

Should you have any questions or concerns please feel free to contact me.

Thank You,
Ugo

Ugonna Daniel-Muoneke | Assistant Planner
Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South, Kent, WA 98032
Office | 425.251.6222 ext. 7302
umuoneke@barghausen.com | <http://www.barghausen.com>

 Please consider the environment before printing this email.

From: Zouboulakis, Chris (ECY) [mailto:czou461@ECY.WA.GOV]
Sent: Thursday, April 07, 2016 10:25 AM
To: Ugo Daniel-Muoneke
Cc: Leo, Antony (ECY)
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice to Intent to Close-BCE #6247

Please also include Antony Leo in all future emails because he is the contact person for everything Costco USTs.


From: Ugo Daniel-Muoneke [mailto:umuoneke@barghausen.com]
Sent: Thursday, April 07, 2016 10:03 AM
To: Zouboulakis, Chris (ECY); Greenup, Sherri (ECY)
Cc: Jay Grubb; Alexia Inigues; Mary Weber
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice to Intent to Close-BCE #6247

Good morning Chris,

Pursuant to your request attached is a work schedule for the Silverdale on-site relocation project. Decommissioning is projected to begin May 3rd with tank demo starting on May 5th. Attached is a work schedule, and on the second page the demo work is highlighted purple, beginning at "B1000". We will notify you of any changes to this schedule.

Thank You,
Ugo

Ugonna Daniel-Muoneke | Assistant Planner

Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South, Kent, WA 98032
Office| 425.251.6222 ext. 7302
umuoneke@barghausen.com | <http://www.barghausen.com>
 Please consider the environment before printing this email.

From: Kyle Bembenek [<mailto:Kyle.Bembenek@MG2.com>]
Sent: Wednesday, April 06, 2016 6:34 PM
To: Ugo Daniel-Muoneke; Joe Pomata - Ferguson Construction (joep@fergusonconstruction.com)
Cc: Jay Grubb; Alexia Inigues; Mary Weber; George Runne
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice to Intent to Close-BCE #6247

Decommission is to start May 3rd with tank demo starting on May 5th.

I would prefer to have you submit this information on Costco's behalf in coordination with Joe.

Please confirm again the week of April 25th to finalize date.

Thanks,

Kyle Bembenek

Direct 206.962.6577
Email kyle.bembenek@mg2.com


From: Ugo Daniel-Muoneke [<mailto:umuoneke@barghausen.com>]
Sent: Tuesday, April 05, 2016 9:18 AM
To: Kyle Bembenek; Joe Pomata - Ferguson Construction (joep@fergusonconstruction.com)
Cc: Jay Grubb; Alexia Inigues; Mary Weber
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice to Intent to Close-BCE #6247

Kyle and Joe,

Please be aware of the email below from Chris Zouboulakis from the Department of Ecology. He would like to be given a timeline of the Silverdale Gas Station decommissioning a minimum of **five days** before the decommissioning start date. You may email Chris or Antony directly at czou461@ECY.WA.GOV and ALEO461@ECY.WA.GOV respectively, or we can submit this timeline notification on your behalf if you prefer. If you decide to submit notification yourself, please cc us on any correspondence.

Please feel free to contact me if you have any questions or concerns.

Thank You,
Ugo

Ugonna Daniel-Muoneke | Assistant Planner
Barghausen Consulting Engineers, Inc.
18215 72nd Avenue South, Kent, WA 98032
Office| 425.251.6222 ext. 7302
umuoneke@barghausen.com | <http://www.barghausen.com>
 Please consider the environment before printing this email.

From: Zouboulakis, Chris (ECY) [<mailto:czou461@ECY.WA.GOV>]
Sent: Tuesday, April 05, 2016 8:16 AM
To: Ugo Daniel-Muoneke; Greenup, Sherri (ECY)
Cc: Jay Grubb; Alexia Inigues; Mary Weber; Leo, Antony (ECY)
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice Intent to Close-BCE #6247

Thank you. Please let ECY know (myself or Antony) what the timetable looks like, e.g. time tank bottoms will be exposed etc. -5D before the actual removal date.

From: Kyle Bembenek [<mailto:Kyle.Bembenek@MG2.com>]
Sent: Monday, March 28, 2016 11:34 AM
To: Joe Pomata - Ferguson Construction (joep@fergusonconstruction.com)
Cc: Jay Grubb; Alexia Inigues; Mary Weber; Ugo Daniel-Muoneke; George Runne
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice to Intent to Close-BCE #6247

Joe,

Please confirm the request from Ugo below.

Thanks,

Kyle Bembenek

Direct 206.962.6577

Email kyle.bembenek@mg2.com

From: Ugo Daniel-Muoneke [<mailto:umuoneke@barghausen.com>]
Sent: Monday, March 28, 2016 11:32 AM
To: Kyle Bembenek
Cc: Jay Grubb; Alexia Inigues; Mary Weber
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice to Intent to Close-BCE #6247

Good morning Kyle,

I am writing you to confirm the estimated date, May 5th, for the beginning of the Decommissioning phase of the Silverdale On-Site relocation project. Additionally, please confirm that Granite Petroleum are the Licensed Decommissioners for this project.

Should you have any questions or concerns please feel free to contact me.

Thank You,
Ugo

Ugonna Daniel-Muoneke | Assistant Planner
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Office| 425.251.6222 ext. 7302
umuoneke@barghausen.com | <http://www.barghausen.com>

 Please consider the environment before printing this email.

From: Kyle Bembenek [<mailto:Kyle.Bembenek@MG2.com>]
Sent: Friday, March 11, 2016 2:52 PM
To: Ugo Daniel-Muoneke
Cc: Jay Grubb; Alexia Inigues; Mary Weber; George Runne
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice-BCE #6247

Thank you for the confirmation

Kyle Bembenek

Direct 206.962.6577
Email kyle.bembenek@mg2.com

From: Ugo Daniel-Muoneke [<mailto:umuoneke@barghausen.com>]
Sent: Friday, March 11, 2016 2:51 PM
To: Kyle Bembenek <Kyle.Bembenek@MG2.com>
Cc: Jay Grubb <jgrubb@barghausen.com>; Alexia Inigues <ainigues@barghausen.com>; Mary Weber <mweber@barghausen.com>
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice-BCE #6247

I got your message this is what I required. An estimated date is fine with the Department of Ecology.

Thank You,
Ugo

From: Kyle Bembenek [<mailto:Kyle.Bembenek@MG2.com>]
Sent: Friday, March 11, 2016 2:32 PM
To: Ugo Daniel-Muoneke
Cc: Jay Grubb; Alexia Inigues; Mary Weber
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice-BCE #6247

Ugo,

To follow up with my voicemail -
The current date to start demo is May 03, 2016 – Weather dependent - with completion June 02, 2016.

I know from previous conversations with Mary - this date needs to be as accurate as possible and we don't have that surety yet. Please confirm if this date needs to be "set-in-stone" or if this is a placeholder right now.

Please confirm this is ok.

Thanks,

Kyle Bembenek

Direct 206.962.6577
Email kyle.bembenek@mg2.com

From: Ugo Daniel-Muoneke [<mailto:umuoneke@barghausen.com>]
Sent: Friday, March 11, 2016 2:07 PM
To: Kyle Bembenek <Kyle.Bembenek@MG2.com>
Cc: Jay Grubb <jgrubb@barghausen.com>; Alexia Inigues <ainigues@barghausen.com>; Mary Weber

<mweber@barghausen.com>

Subject: FW: WA-Silverdale-Loc. No. 13-30 Day Notice-BCE #6247

Good afternoon Kyle,

Pursuant to the request below from Chris Zouboulakis, please provide me with the estimated "Date project is expected to begin" for Decommissioning part of the Silverdale On-Site Relocation project. I need this date in order to complete the 30-Day notice to close.

Thank You,
Ugo

From: Zouboulakis, Chris (ECY) [<mailto:czou461@ECY.WA.GOV>]
Sent: Friday, March 11, 2016 11:54 AM
To: Ugo Daniel-Muoneke; Greenup, Sherri (ECY)
Cc: Jay Grubb; Alexia Inigues; Mary Weber
Subject: RE: WA-Silverdale-Loc. No. 13-30 Day Notice-BCE #6247

I also need the 30D Notice to decom the existing tanks


From: Ugo Daniel-Muoneke [<mailto:umuoneke@barghausen.com>]
Sent: Friday, March 11, 2016 10:32 AM
To: Greenup, Sherri (ECY)
Cc: Zouboulakis, Chris (ECY); Jay Grubb; Alexia Inigues; Mary Weber
Subject: WA-Silverdale-Loc. No. 13-30 Day Notice-BCE #6247

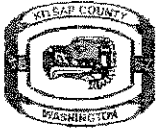
Good morning Sherri,

Attached for your review and approval is the Underground Storage Tank 30-Day Notice for the proposed Costco on-site relocation project in Silverdale. Tank installation is scheduled to begin on March 23, 2016. Please let me know if the contractors may begin work on the 23rd as planned or if we will need a waiver since the original 30-day notice, submitted on December 11, 2015, expires today.

Should you have any questions or concerns please feel free to contact Me or Mary Weber of this office.

Thank You,
Ugo

Ugonna Daniel-Muoneke | Assistant Planner
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 Please consider the environment before printing this email.



Kitsap County Department of Community Development
Kitsap County Fire Prevention Bureau



FIRE INSPECTION AND TESTS CARD

PERMIT NUMBER:

15 02935

This Placard must be posted on or near building and the "Approved" plans must be available at the site.

Permit Type:

Fire Code Permit Construction -
Flammable and Combustible Liquids

Use:

Decommission of old fuel tanks

Address:

10000 MICKELBERRY RD NW

Project:

Costco Fuel Station

Owner:

COSTCO WHOLESALE CORP

Applicant:

COSTCO WHOLESALE CORP

Code Edition:

IFC 2012

Additional Notes:

Inspection Results Legend:

AP = Approved

DA = Disapproved

DP = Disapproved with Penalty

A \$50.00 reinspection fee will apply if the project is not ready for the requested inspection, or corrections have not been completed.

No use is permitted prior to final inspection and issuance of the Fire Code Permit.

AO - white out / wrong permit signed.

Required Inspections or Tests Kitsap County Fire Marshal's Office Inspection Line 360-337-5777	Approved By:	DATE
Fire Code Inspection	<i>(SM)</i>	<i>5/3/16</i>

Notes:

DO NOT REMOVE



7343 E. MARGINAL WAY SOUTH
SEATTLE, WASHINGTON 98108
PH. (206) 832-3000
FAX (206) 832-3030
24 HOUR EMERGENCY PHONE: 1-888-832-3008

73634

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR <u>COSTCO GRANITE PETROLEUM</u>		CONTACT	JOB # <u>74584</u>
ADDRESS <u>10000 MIRKELBERRY RD. NW</u>		PHONE#	LOAD # <u>1</u>
CITY, STATE, ZIP <u>SILVERDALE WA</u>		<u>DISPATCH</u>	DATE <u>5-5-16</u>
CARRIER <u>EMERALD</u>		PHONE# <u>206-832-3000</u>	DOCUMENT # <u>73634</u>
CONSIGNEE <u>EMERALD RECYCLING INC.</u>		CONTACT	TRUCK # <u>7011</u>
ADDRESS <u>1500 AIRPORT WAY S.</u>		PHONE#	PRODUCT TYPE <u>LIP</u>
CITY, STATE, ZIP <u>SEATTLE WA 98134</u>			EST. GALLONS <u>716</u>

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
X	A	<u>UN1203, GASOLINE, 3, PGT</u>	<u>1</u>	<u>TT</u>	<u>716</u>
	B				
	C				
	D				

A. WPQ # _____ DISP. CODE: _____ C. WPQ # _____ DISP. CODE: _____
B. WPQ # _____ DISP. CODE: 602901G D. WPQ # _____ DISP. CODE: _____

DISPOSAL

WASH OUT: YES (X) NO () 3006 GAL WASHOUT
E. WATER 951 GALLONS LOCATION S-2 TEST PH 7.5 DISP. CODE WTP-LU
F. SOLIDS 5 GALLONS LOCATION DRUM TEST _____ DISP. CODE GAS-S-2
_____ % SUSPENDED SOLIDS BY CENTRIFUGE + _____ GALS SEDIMENT
G. OIL/DIESEL/GAS 60 GALLONS LOCATION S-2 TEST _____ DISP. CODE STOR-GAS
HOC'S _____ PCB'S _____ B.S.&W. _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR, Part 261 or 40 CFR Part 761.

X Patrick Alamillo
SHIPPER (PRINT NAME)
X LEE HOPF
CARRIER - DRIVER 1 (PRINT NAME)
X _____
CARRIER - DRIVER 2 (PRINT NAME)
X Benjamin
CONSIGNEE (PRINT NAME)

X Patrick Alamillo
SIGNATURE
X Lee Hopf
SIGNATURE
X _____
SIGNATURE
X Benjamin
SIGNATURE

DATE: 5-5-16
DATE: 5-5-16
DATE: _____
DATE: 05/05/16

JOB FILE



EMERALD

An Environmental Company

WV

CLEANING CERTIFICATE

This is an on-site cleaning certificate. This certificate indicates that the following underground tanks, tanker-trailers and or ISO containers has had all liquids and sludge's removed and was washed, rinsed and cleaned of all residues by EMERALD FIELD SERVICES DIVISION. The tank has been re-inspected to ensure that all foreign material was removed and is cleaned to the customer's satisfaction.

Emerald Services, Inc.

- JOB NUMBER: 74584
- DATE CLEANED: 5/5/16
- DATE INSPECTED: 5/5/16
- CONTAINER OR TRUCK #: 3 x 20,000 gal gas storage tanks
- TANK CLEANER SIGNATURE: Nathan Calabrese
- INSPECTOR'S SIGNATURE: _____
- CUSTOMER'S SIGNATURE: _____
- CONTAINER LAST CONTAINED: unleaded gasoline

work done at Silverdale Costco
10000 Michelberry Rd NW Silverdale WA



5-18-165

Ferguson Construction

Attention: **Joe Pomata, PM**

13810 SE Eastgate Way, Suite 110

Bellevue, WA 98005

**RE: Costco Fuel Station Relocation – Silverdale, WA
UST Destruction Certificate(s)**

Dear Joe,

Please accept this letter as a **Certificate of Tank Destruction** specific to the 3 each underground storage tanks that Granite Petroleum and its subcontractor removed from the original Costco Fuel Station facility located at 10000 Mickelberry RD NW, Silverdale, WA 98383.

Granite Petroleum certifies that the UST's manufactured by Containment Solutions, UL Numbers 898486 (Unleaded #1), 898480 (Unleaded #2) and 898486 (Premium), shall not be repurposed, placed into service or used in any capacity as a storage tank. We certify that the tanks shall be rendered unusable and taken to a recycle facility.

Sincerely,
Granite Petroleum, Inc.

A handwritten signature in blue ink, appearing to read "R. Joseph Myers", is written over a horizontal line.

R. Joseph Myers,
President

Cc: Marc Lundt, File

MAL/mal

S:\02 Current Jobs\1413-Avista Kettle Falls\Kettle Falls Avista Tank Destruction Certificate.docx

**APPENDIX B
PHOTOGRAPHIC LOG**

**ERTS #664942 – COSTCO SILVERDALE FUEL FACILITY
UST CLOSURE AND INDEPENDENT CLEANUP REPORT
10000 MICKELBERRY ROAD NORTHWEST
SILVERDALE, WASHINGTON**

PACIFIC CREST NO. 182-003

Appendix B – Photographic Log
UST Closure and Independent Cleanup Report
10000 Mickleberry Road Northwest
Silverdale, Washington
Pacific Crest No. 182-003

PHOTOGRAPHS

Photograph 1: View of dispenser island prior to excavation, facing southwest towards Mickleberry Road NW.

Photograph 2: View of exposed surface of underground storage tanks (USTs) prior to excavation, facing north.

Photograph 3: View of UST #3 removal, the northmost UST, facing north.

Photograph 4: View of on-site UST #3 demolition, facing north.**Photograph 5:** View of farm machine area #1 in the north corner of the Subject Property, facing southeast.

Photograph 6: View of UST #1 removal, facing northwest.

Photograph 7: View of on-site demolition of UST #1, facing northwest.

Photograph 8: View of product piping line removal between USTs and dispensers, facing west.

Photograph 9: View of removal of product piping lines and dispenser excavation, facing west

Appendix B – Photographic Log
UST Closure and Independent Cleanup Report
10000 Mickleberry Road Northwest
Silverdale, Washington
Pacific Crest No. 182-003



Photograph 1: View of dispenser island prior to excavation, facing southwest towards Mickleberry Road NW.



Photograph 2: View of exposed surface of underground storage tanks (USTs) prior to excavation, facing north.

Appendix B – Photographic Log
UST Closure and Independent Cleanup Report
10000 Mickleberry Road Northwest
Silverdale, Washington
Pacific Crest No. 182-003



Photograph 3: View of UST #3 removal, the northmost UST, facing north.



Photograph 4: View of on-site UST #3 demolition, facing north.

Appendix B – Photographic Log
UST Closure and Independent Cleanup Report
10000 Mickleberry Road Northwest
Silverdale, Washington
Pacific Crest No. 182-003



Photograph 5: View of in-place demolition of UST #2, facing northwest.



Photograph 6: View of UST #1 removal, facing northwest.

Appendix B – Photographic Log
UST Closure and Independent Cleanup Report
10000 Mickleberry Road Northwest
Silverdale, Washington
Pacific Crest No. 182-003



Photograph 7: View of on-site demolition of UST #1, facing northwest.



Photograph 8: View of product piping line removal between USTs and dispensers, facing west.

Appendix B – Photographic Log
UST Closure and Independent Cleanup Report
10000 Mickleberry Road Northwest
Silverdale, Washington
Pacific Crest No. 182-003



Photograph 9: View of removal of product piping lines and dispenser excavation, facing west

APPENDIX C
UST SITE ASSESSMENT CHECKLIST

ERTS #664942 – COSTCO SILVERDALE FUEL FACILITY
UST CLOSURE AND INDEPENDENT CLEANUP REPORT
10000 MICKELBERRY ROAD NORTHWEST
SILVERDALE, WASHINGTON

PACIFIC CREST NO. 182-003

SITE CHECK/SITE ASSESSMENT CHECKLIST FOR UNDERGROUND STORAGE TANKS

UST ID #: 435340

County: Kitsap

This checklist certifies that site check or site assessment activities were performed in accordance with Chapter 173-360 WAC. Instructions are found on the last page.

I. UST FACILITY		II. OWNER/OPERATOR INFORMATION	
Facility Compliance Tag #: A1354	Owner/Operator Name: Costco Wholesale Corporation		
UST ID #: 435340	Business Name: Costco Whole Corporation		
Site Name: Costco Silverdale Fuel Facility	Address: 999 Lake Drive		
Site Address: 10000 Mickelberry Road Northwest	City: Issaquah	State: WA	Zip: 98027
City: Silverdale, WA	Phone: (425) 313 6052		
Phone: (425) 313 6052	Email: pkahn@costco.com		
III. CERTIFIED SITE ASSESSOR			
Service Provider Name: Joel Harrington		Company Name: Pacific Crest Environmental, LLC	
Cell Phone: (360) 689-4481	Email: jharrington@pcenv.com	Address: 1531 Bendigo Blvd N	
Certification #: 8415703	Exp. Date: 3/15/18	City: North Bend	State: WA Zip: 98045
IV. TANK INFORMATION			
TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	DATE SITE CHECK OR ASSESSMENT CONDUCTED
1	20,000 gallons	Unleaded Gasoline	5/10/2016
2	20,000 gallons	Unleaded Gasoline	5/10/2016
3	20,000 gallons	Unleaded Gasoline	5/10/2016
V. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT (check one)			
<input checked="" type="checkbox"/> Release investigation following permanent UST system closure (i.e. tank removal or closure-in-place).			
<input type="checkbox"/> Release investigation following a failed tank and/or line tightness test.			
<input type="checkbox"/> Release investigation following discovery of contaminated soil and/or groundwater.			
<input type="checkbox"/> Release investigation directed by Ecology to determine if the UST system is the source of offsite impacts.			
<input type="checkbox"/> UST system is undergoing a "change-in-service", which is changing from storing a regulated substance (e.g. gasoline) to storing a non-regulated substance (e.g. water).			
<input type="checkbox"/> Directed by Ecology for UST system permanently closed or abandoned before 12/22/1988.			
<input type="checkbox"/> Other (describe):			

VI. CHECKLIST

The site assessor must check each of the following items and include it in the report.
Sections referenced below can be found in the Ecology publication
Guidance for Site Checks and Site Assessments for Underground Storage Tanks.

	YES	NO
1. The location of the UST site is shown on a vicinity map.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. A brief summary of information obtained during the site inspection is provided (Section 3.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. A summary of UST system data is provided (Section 3.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. The soils characteristics at the UST site are described. (Section 5.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is there any apparent groundwater in the tank excavation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. A brief description of the surrounding land use is provided. (Section 3.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. The name and address of the laboratory used to perform analyses is provided. The methods used to collect and analyze the samples, including the number and types of samples collected, are also documented in the report. The data from the laboratory is appended to the report.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. The following items are provided in one or more sketches:		
• Location and ID number for all field samples collected	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• If applicable, groundwater samples are distinguished from soil samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Location of samples collected from stockpiled excavated soil	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Tank and piping locations and limits of excavation pit	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Adjacent structures and streets	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Approximate locations of any on-site and nearby utilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. If sampling procedures are different from those specified in the guidance, has justification for using these alternative sampling procedures been provided? (Section 3.4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method, and detection limit for that method. Any sample exceeding MTCA Method A cleanup standards are highlighted or bolded.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Any factors that may have compromised the quality of the data or validity of the results are described.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred. The requirements for reporting confirmed releases can be found in WAC 173-360-372.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

VII. REQUIRED SIGNATURES

Signature acknowledges the Site Check or Site Assessment complies with UST regulations WAC 173-360-360 through -395.

JEEL HARRINETEK

Print or Type Name

JEEL HARRINETEK

Signature of Certified Site Assessor

6/27/16

Date

SITE CHECK/SITE ASSESSMENT CHECKLIST

FOR UNDERGROUND STORAGE TANKS

INSTRUCTIONS

This checklist must accompany the results of a Site Check Report, which is performed if a release of petroleum or other regulated substance is suspected. It is also required to accompany a Site Assessment Report, which is required following the permanent closure or “change-in-service” of an underground storage tank system. This form is required to be filled out whether or not contamination is found. This checklist is to be completed by the Site Assessor and submitted **within thirty days of completing** these activities to the following address:

Dept. of Ecology
UST Section
PO Box 47655
Olympia, WA 98504-7655

- I./II. UST Facility and Owner/Operator Information:** Fill out these sections completely. If you do not know your UST ID number, include the facility compliance tag number.
- III. Service Provider Information:** It is the responsibility of the ICC-certified Site Assessor to ensure that sampling and documentation procedures are completed in accordance with Ecology’s *Guidance for Site Checks and Site Assessment for Underground Storage Tanks*.
- IV. Tank Information:** Use the same Tank identification numbers listed on the facility’s Business License which is based on the most recent UST Addendum on file with Ecology. List the last substance stored in each tank, the tank sizes and the date the site check or site assessment was completed.
- V. Required Signature:** The Site Assessor signature certifies these procedures were followed.

All confirmed releases must be reported to Ecology by the owner within 24 hours and by service providers within 72 hours of discovery. A Site Characterization Report must be submitted to Ecology within 90 days after confirming a release.

Further questions? Please contact your regional office below and ask for a tank inspector to assist you.

Regional Office

Central (509) 575-2490

Eastern (509) 329-3400

HQ (360) 407-7170

Northwest (425) 649-7000

Southwest (360) 407-6300

Counties Served

Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima

Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman

Federal facilities in Western Washington

Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom

Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum

or find a complete list of UST inspectors at:
www.ecy.wa.gov/programs/tcp/ust-lust/people.html

**APPENDIX D
LABORATORY ANALYTICAL REPORTS**

**ERTS #664942 – COSTCO SILVERDALE FUEL FACILITY
UST CLOSURE AND INDEPENDENT CLEANUP REPORT
10000 MICKELBERRY ROAD NORTHWEST
SILVERDALE, WASHINGTON**

PACIFIC CREST NO. 182-003



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 5, 2016

April Wiebenga
Pacific Crest Environmental, LLC
1531 Bendigo N.
North Bend, WA 98045

Re: Analytical Data for Project 182-003
Laboratory Reference No. 1605-019

Dear April:

Enclosed are the analytical results and associated quality control data for samples submitted on May 3, 2016.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 5, 2016
Samples Submitted: May 3, 2016
Laboratory Reference: 1605-019
Project: 182-003

Case Narrative

Samples were collected on May 3, 2016 and received by the laboratory on May 3, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: May 5, 2016
 Samples Submitted: May 3, 2016
 Laboratory Reference: 1605-019
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UST pit_MW-050316						
Laboratory ID: 05-019-01						
Benzene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
Toluene	1.7	1.0	EPA 8021B	5-4-16	5-4-16	
Ethyl Benzene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
m,p-Xylene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
o-Xylene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
Gasoline	ND	100	NWTPH-Gx	5-4-16	5-4-16	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	84	71-111				



Date of Report: May 5, 2016
 Samples Submitted: May 3, 2016
 Laboratory Reference: 1605-019
 Project: 182-003

**NWTPH-Gx/BTEX
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0504W2					
Benzene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
Toluene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
Ethyl Benzene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
m,p-Xylene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
o-Xylene	ND	1.0	EPA 8021B	5-4-16	5-4-16	
Gasoline	ND	100	NWTPH-Gx	5-4-16	5-4-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	71-111				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-028-01							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				82	85	71-111		

MATRIX SPIKES

Laboratory ID:	05-028-01									
	MS	MSD	MS	MSD		MS	MSD			
Benzene	50.8	50.4	50.0	50.0	ND	102	101	83-123	1	15
Toluene	51.9	50.2	50.0	50.0	ND	104	100	83-124	3	16
Ethyl Benzene	51.5	49.0	50.0	50.0	ND	103	98	82-123	5	15
m,p-Xylene	51.9	49.0	50.0	50.0	ND	104	98	81-125	6	17
o-Xylene	51.2	48.3	50.0	50.0	ND	102	97	82-123	6	15
Surrogate:										
Fluorobenzene						89	91	71-111		





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Laboratory Number: 05-019

Turnaround Request (in working days)		Laboratory Number: 05-019																	
(Check One)																			
<input type="checkbox"/> Same Day																			
<input checked="" type="checkbox"/> 1 Day																			
<input type="checkbox"/> 2 Days																			
<input type="checkbox"/> 3 Days																			
<input type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)																			
<input type="checkbox"/> _____ (other)																			
Number of Containers																			
Date Sampled	Time Sampled	Matrix	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
5/31/16	1405	W		X															
Signature		Company	Date	Time	Comments/Special Instructions														
		Pacific Crest	5/31/16	16:42	email to: Awiebinga@pcenvi.com & Wcarroll@arrowsenvi.com & Eharrington@pcenvi.com														
Relinquished																			
Received			5/31/16	16:42															
Relinquished																			
Received																			
Relinquished																			
Received																			
Reviewed/Date	Reviewed/Date		Chromatograms with final report <input type="checkbox"/>																



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 12, 2016

April Wiebenga
Pacific Crest Environmental, LLC
1531 Bendigo N.
North Bend, WA 98045

Re: Analytical Data for Project 182-003
Laboratory Reference No. 1605-084

Dear April:

Enclosed are the analytical results and associated quality control data for samples submitted on May 11, 2016.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 12, 2016
Samples Submitted: May 11, 2016
Laboratory Reference: 1605-084
Project: 182-003

Case Narrative

Samples were collected on May 9 and 10, 2016 and received by the laboratory on May 11, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX (soil) Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	SW1-050916-11.5					
Laboratory ID:	05-084-01					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.051	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.051	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.051	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.051	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.1	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	75	68-129				
Client ID:	SW2-050916-11.0					
Laboratory ID:	05-084-02					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.068	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.068	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.068	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.068	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.8	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	95	68-129				
Client ID:	SW3-051016-11.5					
Laboratory ID:	05-084-03					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.065	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.065	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.065	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.065	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.5	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	SW4-051016-11.5					
Laboratory ID:	05-084-04					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.9	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	68-129				
Client ID:	SW5-051016-11.5					
Laboratory ID:	05-084-07					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.6	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	68-129				
Client ID:	SW6-051016-11.5					
Laboratory ID:	05-084-08					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.9	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	SW7-051016-11.0					
Laboratory ID:	05-084-09					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.060	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.060	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.060	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.060	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.0	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	68-129				
Client ID:	SW8-051016-11.0					
Laboratory ID:	05-084-10					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.062	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.062	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.062	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.062	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.2	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	68-129				
Client ID:	SP1-051016					
Laboratory ID:	05-084-11					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.6	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	82	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	SP2-051016					
Laboratory ID:	05-084-12					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.9	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	68-129				
Client ID:	SP3-051016					
Laboratory ID:	05-084-13					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.064	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.064	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.064	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.064	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.4	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	68-129				
Client ID:	PP1-051016-2.0					
Laboratory ID:	05-084-14					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.065	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	0.11	0.065	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	0.11	0.065	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.065	EPA 8021B	5-11-16	5-11-16	
Gasoline	51	6.5	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	82	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	SP4-051016					
Laboratory ID:	05-084-15					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.3	NWTPH-Gx	5-11-16	5-11-16	

Surrogate: *Percent Recovery* *Control Limits*
Fluorobenzene 84 68-129

Client ID:	SP5-051016					
Laboratory ID:	05-084-16					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.3	NWTPH-Gx	5-11-16	5-11-16	

Surrogate: *Percent Recovery* *Control Limits*
Fluorobenzene 87 68-129

Client ID:	PP2-051016-2.0					
Laboratory ID:	05-084-17					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.3	NWTPH-Gx	5-11-16	5-11-16	

Surrogate: *Percent Recovery* *Control Limits*
Fluorobenzene 82 68-129



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	PP3-051016-2.0					
Laboratory ID:	05-084-18					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.053	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.3	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	68-129				
Client ID:	DI1-051016-2.5					
Laboratory ID:	05-084-19					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.056	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.6	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	82	68-129				
Client ID:	DI2-051016-3.0					
Laboratory ID:	05-084-20					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.059	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.9	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DI2-B-051016-3.0					
Laboratory ID:	05-084-21					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.066	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.066	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.066	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.066	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.6	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	96	68-129				
Client ID:	DI3-051016-3.0					
Laboratory ID:	05-084-22					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.063	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.063	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.063	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.063	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.3	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	68-129				
Client ID:	DI4-051016-3.0					
Laboratory ID:	05-084-23					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.070	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.070	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.070	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.070	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	7.0	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	98	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DI5-051016-3.0					
Laboratory ID:	05-084-24					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.073	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.073	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.073	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.073	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	7.3	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	68-129				
Client ID:	DI6-051016-3.0					
Laboratory ID:	05-084-25					
Benzene	0.054	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	0.43	0.064	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.064	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.064	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.064	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.4	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	68-129				
Client ID:	DI7-051016-3.0					
Laboratory ID:	05-084-26					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.063	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.063	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.063	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.063	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	6.3	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DI8-051016-3.0					
Laboratory ID:	05-084-27					
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.071	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.071	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.071	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.071	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	7.1	NWTPH-Gx	5-11-16	5-11-16	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	96	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

**NWTPH-Gx/BTEX
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0511S1						
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.0	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	82	68-129				
Laboratory ID: MB0511S2						
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.0	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	68-129				
Laboratory ID: MB0511S3						
Benzene	ND	0.020	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	0.050	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	5.0	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	97	68-129				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

**NWTPH-Gx/BTEX
 DUPLICATE QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<hr/>								
Laboratory ID:	05-084-10							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<hr/>								
Surrogate:								
Fluorobenzene				88	90	68-129		
<hr/>								
Laboratory ID:	05-084-11							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<hr/>								
Surrogate:								
Fluorobenzene				83	82	68-129		
<hr/>								
Laboratory ID:	05-084-27							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
<hr/>								
Surrogate:								
Fluorobenzene				95	98	68-129		



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

**NWTPH-Gx/BTEX
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
Laboratory ID:	SB0511S1									
	SB	SBD	SB	SBD		SB	SBD			
Benzene	0.982	1.01	1.00	1.00		98	101	76-124	3	17
Toluene	0.934	1.00	1.00	1.00		93	100	78-124	7	16
Ethyl Benzene	0.934	0.988	1.00	1.00		93	99	77-123	6	17
m,p-Xylene	0.940	0.992	1.00	1.00		94	99	78-124	5	17
o-Xylene	0.936	0.981	1.00	1.00		94	98	76-123	5	18
Surrogate:										
Fluorobenzene						83	87	68-129		
Laboratory ID:	SB0512S2									
	SB	SBD	SB	SBD		SB	SBD			
Benzene	0.933	0.995	1.00	1.00		93	100	76-124	6	17
Toluene	0.923	0.983	1.00	1.00		92	98	78-124	6	16
Ethyl Benzene	0.904	0.961	1.00	1.00		90	96	77-123	6	17
m,p-Xylene	0.912	0.968	1.00	1.00		91	97	78-124	6	17
o-Xylene	0.917	0.969	1.00	1.00		92	97	76-123	6	18
Surrogate:										
Fluorobenzene						94	95	68-129		



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: EP1-051016-GW						
Laboratory ID: 05-084-05						
Benzene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	1.8	1.0	EPA 8021B	5-11-16	5-11-16	
o-Xylene	1.2	1.0	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	100	NWTPH-Gx	5-11-16	5-11-16	
<i>Surrogate: Percent Recovery Control Limits</i>						
Fluorobenzene	87	71-111				

Client ID: EP2-051016-GW						
Laboratory ID: 05-084-06						
Benzene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	1.6	1.0	EPA 8021B	5-11-16	5-11-16	
o-Xylene	1.0	1.0	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	100	NWTPH-Gx	5-11-16	5-11-16	
<i>Surrogate: Percent Recovery Control Limits</i>						
Fluorobenzene	87	71-111				



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

**NWTPH-Gx/BTEX
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0511W1					
Benzene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
Toluene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
Ethyl Benzene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
m,p-Xylene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
o-Xylene	ND	1.0	EPA 8021B	5-11-16	5-11-16	
Gasoline	ND	100	NWTPH-Gx	5-11-16	5-11-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	71-111				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-084-05							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	1.76	1.67	NA	NA	NA	NA	5	30
o-Xylene	1.18	1.11	NA	NA	NA	NA	6	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				87	87	71-111		

MATRIX SPIKES

Laboratory ID:	05-084-05									
	MS	MSD	MS	MSD		MS	MSD			
Benzene	51.8	51.2	50.0	50.0	ND	104	102	83-123	1	15
Toluene	51.4	50.6	50.0	50.0	ND	103	101	83-124	2	16
Ethyl Benzene	51.3	50.5	50.0	50.0	ND	103	101	82-123	2	15
m,p-Xylene	52.2	51.5	50.0	50.0	1.76	101	99	81-125	1	17
o-Xylene	51.6	50.7	50.0	50.0	1.18	101	99	82-123	2	15
Surrogate:										
Fluorobenzene						93	93	71-111		



Date of Report: May 12, 2016
 Samples Submitted: May 11, 2016
 Laboratory Reference: 1605-084
 Project: 182-003

% MOISTURE

Date Analyzed: 5-11-16

Client ID	Lab ID	% Moisture
SW1-050916-11.5	05-084-01	11
SW2-050916-11.0	05-084-02	16
SW3-051016-11.5	05-084-03	14
SW4-051016-11.5	05-084-04	15
SW5-051016-11.5	05-084-07	15
SW6-051016-11.5	05-084-08	9
SW7-051016-11.0	05-084-09	12
SW8-051016-11.0	05-084-10	13
SP1-051016	05-084-11	9
SP2-051016	05-084-12	16
SP3-051016	05-084-13	12
PP1-051016-2.0	05-084-14	15
SP4-051016	05-084-15	6
SP5-051016	05-084-16	7
PP2-051016-2.0	05-084-17	5
PP3-051016-2.0	05-084-18	2
DI1-051016-2.5	05-084-19	6
DI2-051016-3.0	05-084-20	13
DI2-B-051016-3.0	05-084-21	14
DI3-051016-3.0	05-084-22	13
DI4-051016-3.0	05-084-23	17
DI5-051016-3.0	05-084-24	21
DI6-051016-3.0	05-084-25	14
DI7-051016-3.0	05-084-26	15
DI8-051016-3.0	05-084-27	18





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





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Chain of Custody

Page 1 of 3

Laboratory Number: 05-084

Company: Pacific Crest		Turnaround Request (in working days)		Laboratory Number: 05-084																			
Project Number: 182-003		(Check One)																					
Project Name: Kleinfelder-Silverdale Fuel Facility		<input type="checkbox"/> Same Day																					
Project Manager: A. Wieberg		<input checked="" type="checkbox"/> 1 Day																					
Sampled by: J. Harrington		<input type="checkbox"/> 2 Days																					
		<input type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days)																					
		<input type="checkbox"/> (other)																					
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-GX/BTEX	NWTPH-GX	NWTPH-DX	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total PCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
1	SW1-050916-11.5	5/9/16	1030	soil	2		X																X
2	SW2-050916-11.0	5/9/16	1045	soil	2																		X
3	SW3-051016-11.5	5/10/16	858	soil	2																		X
4	SW4-051016-11.5	5/10/16	913	soil	2																		X
5	EP1-051016-GW	5/10/16	1105	Water	3																		X
6	EP2-051016-GW	5/10/16	1106	Water	3																		X
7	SW5-051016-11.5	5/10/16	1210	soil	2																		X
8	SW6-051016-11.5	5/10/16	1216	soil	2																		X
9	SW7-051016-11.0	5/10/16	1235	soil	2																		X
10	SW8-051016-11.0	5/10/16	1245	soil	2																		X
Signature: [Signature]		Company: P.C.		Date: 5/11/16		Time: 820		Comments/Special Instructions															
Relinquished								CC:															
Received								Wcarroll@arrowenv.com															
Relinquished								Jharrington@pcenv.com															
Received								Awieberg@pcenv.com															
Relinquished																							
Received																							
Reviewed/Date								Chromatograms with final report <input type="checkbox"/>															



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Chain of Custody

Company: Pacific Crest		Laboratory Number: 05-084												
Project Number: 182-003														
Project Name: Kleinfelder-Silverdale Fuel Facility														
Project Manager: A. Wiebenga														
Sampled by: J. Harrington														
Turnaround Request (in working days) (Check One) <input type="checkbox"/> Same Day <input checked="" type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days) <input type="checkbox"/> (other) _____		Number of Containers												
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix										
11	SP1-051016	5/10/16	1307	Soil										
12	SP2-051016		1313											
13	SP3-051016		1319											
14	PP1-051016-2.0		1340											
15	SP4-051016		1358											
16	SP5-051016		1407											
17	PP2-051016-2.0		1430											
18	PP3-051016-2.0		1456											
19	DI1-051016-2.5		1512											
20	OSA-051016-3.0		1521											
Signature		Company	Date	Time	Comments/Special Instructions									
		P.C.	5/11/16	820	cc: Wea1016@cr10env.com JHarrington@pcenv.com AWiebenga@pcenv.com									
Relinquished														
Received														
Relinquished														
Received														
Relinquished														
Received														
Reviewed/Date		Reviewed/Date			Chromatograms with final report <input type="checkbox"/>									



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May 17, 2016

April Wiebenga
Pacific Crest Environmental, LLC
1531 Bendigo N.
North Bend, WA 98045

Re: Analytical Data for Project 182-003
Laboratory Reference No. 1605-120

Dear April:

Enclosed are the analytical results and associated quality control data for samples submitted on May 13, 2016.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish or "L" shape.

David Baumeister
Project Manager

Enclosures

Date of Report: May 17, 2016
Samples Submitted: May 13, 2016
Laboratory Reference: 1605-120
Project: 182-003

Case Narrative

Samples were collected on May 13, 2016 and received by the laboratory on May 13, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: May 17, 2016
 Samples Submitted: May 13, 2016
 Laboratory Reference: 1605-120
 Project: 182-003

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DI6-051316-3.4					
Laboratory ID:	05-120-01					
Benzene	ND	0.020	EPA 8021B	5-16-16	5-16-16	
Toluene	ND	0.058	EPA 8021B	5-16-16	5-16-16	
Ethyl Benzene	ND	0.058	EPA 8021B	5-16-16	5-16-16	
m,p-Xylene	ND	0.058	EPA 8021B	5-16-16	5-16-16	
o-Xylene	ND	0.058	EPA 8021B	5-16-16	5-16-16	
Gasoline	ND	5.8	NWTPH-Gx	5-16-16	5-16-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	101	68-129				
Client ID:	PP1-051316-3.0					
Laboratory ID:	05-120-02					
Benzene	ND	0.020	EPA 8021B	5-16-16	5-16-16	
Toluene	ND	0.064	EPA 8021B	5-16-16	5-16-16	
Ethyl Benzene	ND	0.064	EPA 8021B	5-16-16	5-16-16	
m,p-Xylene	ND	0.064	EPA 8021B	5-16-16	5-16-16	
o-Xylene	ND	0.064	EPA 8021B	5-16-16	5-16-16	
Gasoline	ND	6.4	NWTPH-Gx	5-16-16	5-16-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	99	68-129				
Client ID:	WD-051316					
Laboratory ID:	05-120-03					
Benzene	ND	0.020	EPA 8021B	5-16-16	5-16-16	
Toluene	ND	0.047	EPA 8021B	5-16-16	5-16-16	
Ethyl Benzene	ND	0.047	EPA 8021B	5-16-16	5-16-16	
m,p-Xylene	ND	0.047	EPA 8021B	5-16-16	5-16-16	
o-Xylene	ND	0.047	EPA 8021B	5-16-16	5-16-16	
Gasoline	ND	4.7	NWTPH-Gx	5-16-16	5-16-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	68-129				

Date of Report: May 17, 2016
 Samples Submitted: May 13, 2016
 Laboratory Reference: 1605-120
 Project: 182-003

**NWTPH-Gx/BTEX
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0516S1					
Benzene	ND	0.020	EPA 8021B	5-16-16	5-16-16	
Toluene	ND	0.050	EPA 8021B	5-16-16	5-16-16	
Ethyl Benzene	ND	0.050	EPA 8021B	5-16-16	5-16-16	
m,p-Xylene	ND	0.050	EPA 8021B	5-16-16	5-16-16	
o-Xylene	ND	0.050	EPA 8021B	5-16-16	5-16-16	
Gasoline	ND	5.0	NWTPH-Gx	5-16-16	5-16-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	68-129				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-120-01							
	ORIG	DUP						
Benzene	ND	ND	NA	NA	NA	NA	NA	30
Toluene	ND	ND	NA	NA	NA	NA	NA	30
Ethyl Benzene	ND	ND	NA	NA	NA	NA	NA	30
m,p-Xylene	ND	ND	NA	NA	NA	NA	NA	30
o-Xylene	ND	ND	NA	NA	NA	NA	NA	30
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				101	90	68-129		

SPIKE BLANKS

Laboratory ID:	SB0516S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzene	0.883	0.969	1.00	1.00	88	97	76-124	9	17	
Toluene	0.862	0.942	1.00	1.00	86	94	78-124	9	16	
Ethyl Benzene	0.848	0.925	1.00	1.00	85	93	77-123	9	17	
m,p-Xylene	0.854	0.929	1.00	1.00	85	93	78-124	8	17	
o-Xylene	0.850	0.935	1.00	1.00	85	94	76-123	10	18	
Surrogate:										
Fluorobenzene					83	92	68-129			

Date of Report: May 17, 2016
Samples Submitted: May 13, 2016
Laboratory Reference: 1605-120
Project: 182-003

% MOISTURE

Date Analyzed: 5-14-16

Client ID	Lab ID	% Moisture
DI6-051316-3.4	05-120-01	11
PP1-051316-3.0	05-120-02	16
WD-051316	05-120-03	3



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -

ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference



Chain of Custody

05-120

[illegible]

**APPENDIX E
ECOLOGY CORRESPONDENCE**

**ERTS #664942 – COSTCO SILVERDALE FUEL FACILITY
UST CLOSURE AND INDEPENDENT CLEANUP REPORT
10000 MICKELBERRY ROAD NORTHWEST
SILVERDALE, WASHINGTON**

PACIFIC CREST NO. 182-003

Telephone Conversation Memorandum

Page 1 of 1

Date: 5/13/16 Time: 11:45 Initials BC

Project No: 181-003 Phone # (425) 649-7000

Project Name: Costco Silverdale Fuel Facility

☐ Call placed/received from: Placed to Ecology (Colleen Crotty) from Bill Carroll

RE: Report of Historic Release from UST system to Ecology (24 hr)

Reported discovery of historic release of unleaded gasoline that occurred at Costco Silverdale to Ecology. Release based on lab results from two soil samples. Plan is to over excavate and re-sample. Release is not due to a recent spill.

Provided Ecology with:

UST Site ID: 435340 and

Address 10000 Mickelberry Road NW, Silverdale WA 98383

UST System description: 3 20K USTs taken out of service

Samples collected as part of routine Site Assessment/Site Check

Ecology provided ERTS No.: 664942

Action Items:

April Wiebenga

To: awiebenga@pcenv.com
Subject: Update Report - UST and LUST Cleanup - Costco Silverdale (ERTS No. 664942)

From: Lauren Carroll [<mailto:lcarrroll@pcenv.com>]

Sent: Tuesday, June 07, 2016 11:37 AM

To: Musa, Donna K. (ECY) <DMUS461@ECY.WA.GOV>; Crotty, Colleen (ECY) <ccro461@ECY.WA.GOV>

Subject: Update Report - UST and LUST Cleanup - Costco Silverdale (ERTS No. 664942)

Dear Ms. Crotty and Ms. Musa,

This email is to provide the Washington State Department of Ecology (Ecology) with an update on the Leaking Underground Storage Tank (LUST) release verbally reported on May 13, 2016 at 11:30 a.m. on behalf of Costco Wholesale.

A minor release was confirmed in association with two samples collected beneath from product piping and a dispenser island as part of a closure assessment for three, 20,000-gallon double-walled fiberglass UST systems. The release was confirmed on May 12, 2016, following receipt of laboratory analytical report showing a detected concentration of benzene of 0.054 milligrams per kilogram (mg/kg) and gasoline range organics (GRO) of 52 mg/kg, which exceed the Model Toxics Control Act (MTCA) Method A cleanup levels of 0.03 mg/kg and 30 mg/kg, respectively. Samples analyzed from the UST excavation pit, remaining product piping, and remaining dispenser islands were below cleanup levels.

Following the initial report to Ecology, additional excavation and sampling was conducted to remove residual contamination from below the product piping and dispenser island. The analytical results from the soil samples collected from the final excavation limit were below the cleanup level for benzene and GRO. Pacific Crest Environmental is preparing a report documenting the UST removal and independent cleanup.

We trust that this information in this update report is sufficient for your requirements. Please contact myself or Mike Black if you have any questions regarding this information.

Thank you – Lauren Carroll

Lauren G Carroll | Principal Hydrogeologist
Pacific Crest Environmental, LLC
O: 425-888-4990 / C: 425-985-6088 / F: 425-888-4994
lcarrroll@pcenv.com
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No virus found in this message.

Checked by AVG - www.avg.com

Version: 2016.0.7640 / Virus Database: 4604/12459 - Release Date: 06/20/16